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AVIATION TECHNOLOGY

AERODYNAMICS

- Advanced Rotorcraft Configurations
- Computational Aerodynamics
- Active Control Technology
- Engine/Flight Control Integration

PAYOFFS: Increased maneuverability, agility, load. Lower [illegible] improved reliability, effectiveness

- High Cycle Temperature
- High Cycle Pressure
- High Work, Fewer, Lighter Components
- High Temperature Metallurgy/Tribology
- High Strength Ceramics
- Computational Fluid Dynamics
- Alloy Modeling
- Life Prediction

PAYOFFS: Significantly increased power-to-weight ratio, lower [illegible] reliability and

AVIONICS MISSION EQUIPMENT INTEGRATION

- Advanced Sensors
- [illegible]

PAYOFFS: Reduced task times and crew workloads. All [illegible] enhanced command and control. Improved survivability and mission effectiveness

STRUCTURES

- [illegible] Mechanics

PAYOFFS: Significant structural [illegible] reliability and maintainability

SYSTEMS INTEGRATION/SIMULATION

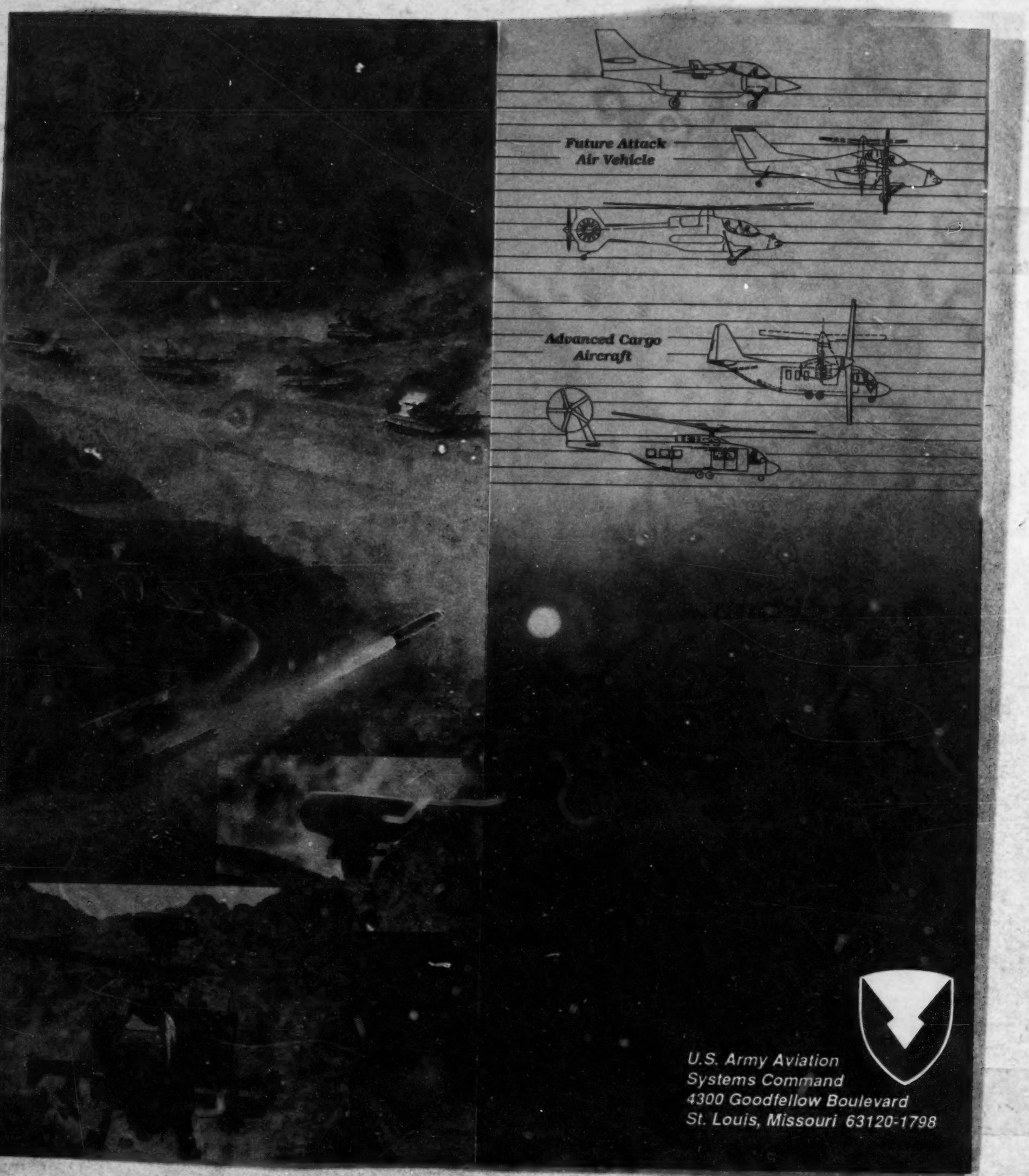
- Artificial Intelligence
- Technology Insertion
- Human Modeling
- Integrated Avionics
- Control Integration
- Human Factors
- Computer Aided Engineering
- Simulation Technology / Networking/Evaluation Techniques

PAYOFFS: Increased combat effectiveness. Reduced crew [illegible] risk, and costs. Evaluate before hardware

FIELD SUPPORT

- Embedded Micro Sensor Development
- Artificial Intelligence Application for Diagnostics/Prognostics
- Advanced State Flight Data Acquisition/Processing

PAYOFFS: Improved [illegible] launch survivability, maintainability, and mission availability



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